

CLAIMS

- 1 1. A method of generating a protein model, the method including the steps of:
2 (A) identifying a 3-dimensional structure of a protein;
3 (B) obtaining positional data for the protein including Cartesian coordinates;
4 (C) converting the Cartesian coordinates so generated to animation data; and
5 (D) employing a software program to generate an animated model of a protein
6 using animation data.

- 1 2. A method of generating a protein model as defined in claim 1, including the fur-
2 ther steps of:
3 using a melscript program to describe positional relationships between predeter-
4 mined portions of a protein; and
5 using said melscript program, producing an animation of the protein.

- 1 3. The method of generating a protein model a protein as defined in claim 2, in-
2 cluding the further step of:
3 using information to generate spheres to illustrate protein portions; and
4 connecting said spheres to produce a preliminary protein animation image.

- 1 4. The method of generating a protein model a protein as defined in claim 1, in-
2 cluding the further steps of:
3 using NURBS to connect the spheres; and
4 using smoothing techniques to refine the protein animation image.

- 1 5. The method of generating a protein model a protein as defined in claim 1, in-
2 cluding the further steps of:
3 rendering the protein animation image in order to give depth to the preliminary
4 protein animation image.

1 6. The method of generating a protein model a protein as defined in claim 5, wherein
2 said rendering step includes the further step of:
3 setting render globals for the particular image, including setting global attributes
4 for an animation scene.

1 7. The method of generating a protein model a protein as defined in claim 6, in-
2 cluding the further steps of:
1 employing a render editor to set the render globals; and
2 turning a motion blur function off to reduce shadows behind the animation scene.

1 8. The method of generating a protein model a protein as defined in claim 6, in-
2 cluding the further steps of:
 selecting key frame, lighting, color and camera angles to refine the animation to
 produce a final model of a protein.

1 9. A system for producing a protein model comprising:
2 (A) means for identifying the 3-dimensional structure of a target protein using
3 Cartesian coordinate information;
4 (B) a software program that utilizes said Cartesian coordinate information of
5 said target protein and which uses said coordinate information to produce animation data
6 for use in creating an animation of said target protein; and
7 (C) means for displaying a visual animation of said target protein using said
8 data.

1 10. The system as defined in claim 9 wherein said software program is includes mel-
2 script.

1 11. The system as defined in claim 9 wherein said software program includes infor-
2 mation based on NURBS and spheres for producing animation data.